

In re Patent Application of:

FRISCO ET AL.

Serial No. 10/716,987

Filed: November 19, 2003

REMARKS

Applicants would like to thank the Examiner for the thorough examination of the present application. The arguments supporting patentability of the claims are provided below.

I. The Claimed Invention

The present invention, as recited in independent Claim 1, for example, is directed to an aircraft in-flight entertainment system comprising a satellite television (TV) receiver, a plurality of seat electronic boxes (SEBs) spaced throughout the aircraft, and a plurality of passenger video displays connected to the plurality of SEBs. A processor is connected to the satellite TV receiver for determining a component malfunction condition within the satellite TV receiver, and generating responsive thereto a substitute image on the plurality of passenger video displays rather than permit display of an undesired image which would otherwise be produced. The component malfunction is independent of a strength of a signal received at the satellite TV receiver. A storage device is connected to the processor for storing the substitute image.

The processor advantageously determines a component malfunction condition (independent of a strength of a signal received at the satellite TV receiver), and generates a substitute image in response thereto to be displayed on a passenger video display. Without the generated substitute image, the undesired image could be a degraded program image or a default text message image that may be disconcerting to the passenger. Consequently, the substitute image on the passenger

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video display could be a text message that would tend to be helpful to the passenger in understanding that a loss of programming service has occurred, but without raising unnecessary concern for the proper operation of the aircraft to the passenger.

Independent Claim 13 is similar to independent Claim 1, and recites that the processor determines a weak received signal strength condition and a component malfunction, with the component malfunction being independent of a strength of a signal received at the satellite TV receiver.

Independent method Claim 22 is similar to independent device Claim 13.

II. The Claims Are Patentable

The Examiner rejected independent Claim 1 over the Sklar et al. patent in view of the Galipeau et al. patent. The Examiner also rejected independent Claims 13 and 22 over the Sklar et al. patent in view of the Galipeau et al. patent and in further view of the Gangitano patent.

The Examiner cited Sklar et al. as disclosing in FIGS. 1 and 2 an aircraft in-flight entertainment system **50** comprising a satellite television (TV) receiver **42**, at least one passenger video display **56** connected to the satellite TV receiver, and a processor **44** connected to the satellite TV receiver. The Examiner has taken the position that the processor **44** is used to determine an undesired condition and for generating responsive thereto a substitute image on the at least one passenger video

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display **56** rather than permit display of an undesired image which would otherwise be produced.

Sklar et al. discloses that the processor **44** (i.e., region control unit) instructs the receiver unit **42** (i.e., satellite TV receiver) to switch to a different program when the aircraft is soon going to leave the coverage area **26** of the first satellite **24**. Position, time and other related data is used to determine if an available program will finish before the aircraft leaves the current coverage area. The other related data includes signal strength of the received signal. The processor **44** may cause the passenger video display **56** to generate a graphic overlay message explaining to the passenger why that program is no longer available, and suggesting that the passenger try another channel. Such an overlay may state "Because Your Aircraft Will Be Leaving The Coverage Area Of DIRECTV-USA Within The Next 15 Minutes, 'Butch Cassidy & The Sundance Kid' Is Not Currently Available. Please Select Another Program" (column 11, lines 25-33).

As correctly noted by the Examiner, Sklar et al. fails to disclose that the undesired condition may be a component malfunction condition that is determined by the processor **44**. The Examiner cited Galipeau et al. as disclosing this feature of the claimed invention. More particularly, the Examiner characterized the in-flight workstation **200** illustrated in FIG. 9a of Galipeau et al. as performing the processor functions in the claimed invention. Column 11, lines 45-47 in Galipeau et al. discloses that another application of the workstation is as a maintenance

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terminal to help identify faulty components of the system for repair or replacement. The Examiner also stated that the workstation (i.e., processor) **200** is connected to a TV receiver (i.e., video module **152** as shown in FIG. 6b which is part of an integrated seat box **18**) via seat-to-seat cable **20**.

The Applicants submit that the Examiner is using the claims in the present invention as a roadmap for selectively combining the prior art references in an attempt to produce the claimed invention. In Galipeau et al., the Examiner characterized the in-flight workstation **200** illustrated in FIG. 9a as determining a component malfunction condition within a TV receiver (unit **194**, for example). The in-flight workstation **200** is for the flight crew to select which programming is available to passengers. As correctly noted by the Examiner, the workstation may also be used as a maintenance terminal to help identify faulty components of the system for repair or replacement. (column 11, lines 45-47).

When there is a component malfunction in Galipeau et al., this information is displayed to the flight crew so that it can be noted for repair once the aircraft lands. This type of information is not to be displayed to the passengers. If the passengers were to be notified of a component malfunction, then they would likely be concerned about the overall operation of the aircraft.

In sharp contrast, when the processor in the claimed invention determines a component malfunction condition within the satellite TV receiver, a substitute image is generated on the

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plurality of passenger video displays rather than permit display of an undesired image which would otherwise be produced. Galipeau et al. discloses that notification of a component malfunction condition is presented to the flight crew. However, Galipeau et al. fails to disclose displaying a substitute image - either to the flight crew or to the passengers - in response to the component malfunction condition.

The Applicants also submit that the Examiner has mischaracterized the in-flight workstation **200** illustrated in FIG. 9a of Galipeau et al. as determining a component malfunction condition within a TV receiver **194**. The in-flight workstation **200** merely collects status information generated by systems that include built in test equipment BITE. Reference is directed to column 9, lines 38-41 of Galipeau et al., which provides:

"Video module BITE status information **156** is transmitted from the video module **152** to the head end via the data network interface module **114** to enable identification of defective modules." (Emphasis added).

The workstation **200** thus collects the BITE status information **156** from the video modules **152**. This information may then be displayed to the flight crew.

The video modules **152** are not television receivers. Instead, each video module **152** receives data from an IEEE-1394 data bus **22**. The data provided to the video modules **152** is generated by a video input device, such as a television receiver. The Examiner characterized reproducer unit **194** as a TV receiver.

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However, Galipeau et al. fails to disclose that the TV receiver is being tested for a determining a component malfunction condition therein.

The Examiner cited Gangitano as disclosing in FIGS. 4 and 5 a receiver **14** receiving a signal from a satellite, and determining for display **20** the signal strength (via signal strength detector **22**) of the received signal. Gangitano is thus directed to an apparatus for displaying the signal strength of a signal received at an antenna. The Applicants submit that Gangitano does not provide the noted deficiencies of Sklar et al. and Galipeau et al. as discussed in detail above. Moreover, Gangitano fails to make any reference to an aircraft in-flight entertainment system as in the claimed invention. Instead, Gangitano is directed to a terrestrial based structure, such as a house, equipped with a satellite television receiver.

Accordingly, it is submitted that independent Claim 1 is patentable over the Sklar et al. patent in view of the Galipeau et al. patent. Independent Claims 13 and 22 are similar to independent Claim 1. Therefore, it is submitted that these claims are also patentable over the Sklar et al. patent in view of the Galipeau et al. patent and in further view of the Gangitano patent.

In view of the patentability of independent Claims 1, 13 and 22, it is submitted that the dependent claims, which include yet further distinguishing features of the invention are also patentable. These dependent claims need no further discussion herein.

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III. CONCLUSION

In view of the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



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